AMENDMENTS TO THE CLAIMS

1-20. (Canceled)

21. (Currently amended) A medical device comprising a first medical device portion comprising a first surface adapted to contact tissue, said first surface having a surface charge at a site of contact with a host, said surface charge being variable in response to a time dependent signal from a signal generator, and wherein said variation is configured to guide[[s]] the migration of selected cell types to produce a longer useful lifetime of the device by limiting undesirable cellular responses to foreign bodies.

22. (Canceled)

23. (Previously Presented) The medical device of Claim 21, wherein said variation guides endothelial cells.

24. (Previously Presented) The medical device of Claim 21, wherein said variation in surface charge guides fibroblasts.

25. (Previously Presented) The medical device of Claim 21, wherein said medical device is configured for subdermal implantation

26. (Previously Presented) The medical device of Claim 25, wherein said medical device is configured for vascular implantation.

27. (Previously Presented) The medical device of Claim 21, wherein said time dependent signal produces a current density through host tissue or body fluids of between 0.01 and 100 mA/cm^2.

28-36. (Canceled)

37. (Previously Presented) The medical device of Claim 21, wherein the first surface adapted to contact tissue further comprises

one or more first electrodes adapted to be subdermally located in the close proximity of a critical structure or feature of an implanted portion of the device; and the medical device further comprises:

one or more second electrodes located elsewhere, and

control circuitry and power supply adapted to provide for the passage of an electrical current through tissue between the first set of electrodes to the second set of electrodes,

wherein the control circuitry is coupled to both the first set of electrodes and the second set of electrodes, and the electrical current results from the time dependent signal.

38. (Previously Presented) The medical device of claim 37 wherein one or more first electrodes is affixed to the implanted portion of the device.

39. (Previously Presented) The medical device of claim 37 wherein one or more second electrodes is affixed to the implanted portion of the device.

40. (Previously Presented) The medical device of claim 37 wherein one or more first electrodes is not affixed to the implanted portion of the device.

41. (Previously Presented) The medical device of claim 37 wherein one or more second electrodes is not affixed to the implanted portion of the device.

42. (Previously Presented) The medical device of claim 37 wherein the device is adapted to be percutaneous.

43. (Previously Presented) The medical device of claim 37 wherein the device is adapted to be fully implanted.

44. (Previously Presented) The medical device of claim 37 wherein the device further comprises:

a semipermeable structure, wherein the one or more first electrodes is separated from tissue by the semipermeable structure.

45. (Previously Presented) The medical device of claim 37 wherein the further comprises a therapeutic agent delivery element.

46. (Previously Presented) The medical device of claim 37 wherein the device further comprises a biofluids sampling element.

47. (Previously Presented) The medical device of Claim 21, wherein said first surface adapted to contact tissue is configured for fluidic contact with tissue.